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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/911,601	07/24/2001	Robert Albert Boie	19-9-7	3664

7590 12/02/2003

Docket Administrator  
Lucent Technologies Inc.  
101 Crawfords Corner Road ( Room 3J-219)  
Holmdel, NJ 07733-3030

EXAMINER

LEE, JOHN D

ART UNIT PAPER NUMBER

2874

DATE MAILED: 12/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. <u>09/911,601</u>	Applicant(s) <u>BOIE ET AL.</u>	
	Examiner <u>JOHN D. LEE</u>	Art Unit <u>2874</u>	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on July 24, 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                 | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____   |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)        | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ | 6) <input type="checkbox"/> Other: _____                                    |

Claims 1, 7-9, 12-14, 17, 18, 20, 22, 23, 25, 31-33, 35, and 36 are objected to because of the following minor informalities. In the following instances, the word "circuits" should be changed to "circuit chips" for proper antecedent agreement: claim 1, last line; claim 7, line 3; claim 8, line 3; claim 9, lines 3 and 4; claim 12, line 3; claim 14, line 3; claim 18, line 2; claim 31, line 2; claim 32, line 4; and claim 33, lines 3, 6, 10, 11, and 13. Similarly, in the following two instances, the word "circuit" should be changed to "circuit chips" for proper antecedent agreement: claim 13, line 2; and claim 14, line 2. Further, in claim 17, line 3, the word "circuit" should be changed to "circuit chip" for proper antecedent agreement. In claim 13, line 2, the first occurrence of the word "said" should be deleted. In claim 17, line 1, the word "comprising" should be inserted after "further". In the following instances, the term "circuit chips" (plural) should be changed to "circuit chip" (singular): claim 20, lines 1-2; claim 22, lines 1-2; and claim 23, lines 1-2. In claim 25, line 2, the word "at" should be inserted before "least". In claim 33, line 12, the word "was" should be changed to "been" (to reflect the proper grammatical verb tense). In line 2 of each of claims 35 and 36, the word "chip" should be inserted after "circuit".

The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2 and 9 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 2 (as presented) does not end in a period, implying that additional claim language has been omitted. The claim is thus indefinite. For purposes of examination, it will be assumed that the claim is presented in its entirety. Claim 9 is indefinite

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because it fails to identify the claim from which it depends. For purposes of examination, it will be assumed that the claim is intended to depend from claim 6.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-36 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,638,784 to Bartlett et al. Bartlett et al discloses a packaged micro electrical mechanical system (MEMS) device, comprising a packaging within which is mounted at least one optical MEMS device, and a plurality of distinct integrated circuit chips mounted upon the packaging. Bartlett et al does not disclose that one of the integrated circuit chips contains low-voltage digital-to-analog converters, or that another of the integrated circuit chips contains high-voltage amplifiers. In fact, Bartlett et al does not divulge any details regarding the plurality of integrated circuit chips. This lack of specific disclosure would imply to a person of ordinary skill in the art, then, that the subject packaging arrangement is applicable to any and all kinds of integrated circuit chips associated with an optical MEMS device. The person of ordinary skill would know that many optical MEMS devices require low-voltage digital-to-analog converters and higher-voltage amplifiers. It would thus have been obvious to include, in the Bartlett et al packaging arrangement, integrated circuit chips containing low-voltage digital-to-analog converters and high-voltage amplifiers, with appropriate electrical/optical contacting, connecting, and coupling structure interconnecting the optical MEMS device and the integrated circuit chips. The Bartlett et al disclosure encompasses

both direct and indirect mounting of either single chips or multi-chips. The disclosure also encompasses any desired directionality in the mounting of individual circuit chips. The claimed "method" of packaging directly corresponds to the claimed packaging itself, and such method would therefore have been obvious in view of Bartlett et al for the same reasons. The "training" and "replacing" limitations set forth in some of applicant's claims would directly depend upon the types of integrated circuit chips employed. As noted above, Bartlett et al is applicable to *all* types of integrated circuit chips in the package; these claimed limitations would thus have been obvious in view of Bartlett et al.

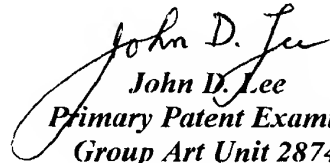
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. A very similar packaging system for MEMS devices which includes distinct integrated circuit chips within the packaging structure can be seen in U.S. Patent Application Publication 2003/0102572 A1 to Nathan et al. This reference is not available against the claims of the present application, however, because of its late filing date. Japanese Patent document 2003-75741 to Boie et al appears to be a publication corresponding to applicant's presently claimed invention.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103(a), the Examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the Examiner to consider the applicability of 35 U.S.C. § 103(c) and potential 35 U.S.C. §§ 102(e), (f) or (g) prior art under 35 U.S.C. § 103(a).

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Any inquiry concerning the merits of this communication should be directed to Examiner John D. Lee at telephone number (703) 308-4886. The Examiner's normal work schedule is Tuesday through Friday, 6:30 AM to 5:00 PM. Any inquiry of a general or clerical nature (i.e. a request for a missing form or paper, etc.) should be directed to the Technology Center 2800 receptionist at telephone number (703) 308-0956, to the technical support staff supervisor (Team 2) at telephone number (703) 308-3072, or to the Technology Center 2800 Customer Service Office at telephone number (703) 306-3329.

  
**John D. Lee**  
**Primary Patent Examiner**  
**Group Art Unit 2874**